



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,457	03/26/2001	Yonggang Du	DE 000050	9422
24737	7590	04/19/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			WONG, BLANCHE	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/817,457

Applicant(s)

DU ET AL.

Examiner

Blanche Wong

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because 1) the labels are hand-written; and 2) the labels for reference numbers 1,2,3 is incorrect. Reference numbers 1,2,3 are base stations.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, an assigned central station (claim 1) and a central station (claim 4) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the method of timeslot sorting as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

### ***Specification***

4. The disclosure is objected to because of the following informalities:
  - On p. 4, line 28, -- WT<sub>i</sub> -- should be replaced with "WT<sub>i</sub>". Same problem with p. 5, line 2 and line 17. Applicant is suggested to check for similar problem throughout the Specification.
  - On p. 4, line 29-30, -- 4 packets ... from ... WT<sub>1</sub> ... to ... WT<sub>4</sub> {(N = 5)<sub>1\_4</sub>} -- should be either "5 packets ..." or "...{(N = 4)<sub>1\_4</sub>}. The transmission order in

Art Unit: 2616

p.5, line 5-6, among other parts of the Specification, should be corrected accordingly.

- On p. 4, line 34, -- {(N - 3)\_2\_4} -- should be replaced with "{(N = 3)\_2\_4}".
- On p. 5, line 17, -- WT\_I -- should be replaced with "WT\_J".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claims 1-4** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With regard to claim 1, line 20-26, a second group -- that are assigned to corresponding ones of said transmitting terminals -- are different from what is described in the Specification, on p.6, line 3-7

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2616

8. **Claims 1-5** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1, it is unclear whether claim 1 is claiming a wireless network or a method within the wireless network.

With regard to claim 1, line 21 and 23, it is unclear what is the difference between the first and second group.

With regard to claim 1, line 31, it is unclear – earlier in time – than what.

With regard to claim 4, it is unclear whether claim 4 is claiming a central station or a method within the central station.

With regard to claim 4, line 21, it is unclear why – subdividing – and where is the initial division of the receiving terminals.

With regard to claim 4, line 23, it is unclear what is meant by – the receiving terminals already used --.

With regard to claim 4, line 29, it is unclear – earlier in time – than what.

With regard to claim 5, it is unclear whether claim 5 is claiming a controller or a method within the controller.

9. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the transmission order" in line 3.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Showgi et al. (Pub No. US2003/0014330).

With regard to claim 5, Showgi discloses

receive requests for transmission from said plurality of transceivers (**remote order terminals 10 transmitting to base transceiver nodes 14 in Fig. 1, para. [0032]; and remote order terminals 22,24,26 transmitting to various service provider transceivers 28, para. [0044];**

**form a first transmitting set (remote order terminals in Fig. 3 connected to one of the multiple locations) including first set transmitters (remote order terminals in Fig. 3 connection to multiple locations in a large venue, para. [0045])** of said plurality of transceivers, each of said first set transmitters having requested transmission to a plurality of requested receivers of said plurality of transceivers;

However, Showgi fails to explicitly show determine a first transmitting terminal of said first set transmitters to be a first one of said first set transmitters to transmit, said first transmitting terminal having requested transmission to a largest number of corresponding receivers of said plurality of requested receivers.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include determine a first transmitting terminal of said first set transmitters to be a first one of said first set transmitters to transmit, said first transmitting terminal having requested transmission to a largest number of corresponding receivers of said plurality of requested receivers. The suggestion/motivation for doing so could be seen in Showgi: "charge more for those seats that are located in sections of the stadium, concert halls, and amphitheaters that are equipped with this system", para. [0057], because it is Examiner's position that the remote order terminals who place a large order in specially designated areas of large venue will and should be served foremost. Therefore, it would have been obvious to combine a service priority with Showgi for the benefit of determine a first transmitting terminal of said first set transmitters to be a first one of said first set transmitters to transmit, said first transmitting terminal having requested transmission to a largest number of corresponding receivers of said plurality of requested receivers, to obtain the invention as specified in claim 5.

***Allowable Subject Matter***

12. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 1, the prior art of record fails to anticipate or make obvious "... determining, from a set of all transmitting terminals within the network, a first subset of the set comprising those terminals that intend to transmit packets to a plurality of

Art Unit: 2616

receiving terminals, and determining a second subset, which includes the remaining terminals of the set of transmitting terminals, which are not contained in the first subset, determining an order where the transmitting terminals of the first subset transmit based on a decreasing number of receiving terminals assigned to each transmitting terminal therein ...", as recited in claim 1.

With regard to claim 4, the prior art of record fails to anticipate or make obvious "... determining, from a set of all transmitting terminals within the network, a first subset of the set comprising those terminals that intend to transmit packets to a plurality of receiving terminals, and determining a second subset, which includes the remaining terminals of the set of transmitting terminals, which are not contained in the first subset, determining a transmitting order in which the transmitting terminals of the first subset transmit, said transmission order being determined in accordance with a decreasing number of receiving terminals assigned to a particular transmitting terminal ...", as recited in claim 2.

Ikeguchi et al. (U.S. Pat No. 4,153,884) discloses a transmitting/receiving mode selection circuit. This circuit is aimed to eliminate delay for look up time of the reference frequency in a phase locked loop operation, col. 14, ln. 29-33. Ikeguchi does not resolve a similar delay as the present application.

Schultz et al. (U.S. Pat No. 6,411,812) discloses an arrangement in radio communications system where timeslots constitutes channels, col. 1, ln. 12-13. However, Schultz teaches the distribution of channels among voice and data transmission in order to obtain spectrum efficiency, col. 1, ln. 14-16.



Art Unit: 2616

Bruhn et al. (U.S. Pat No. 6,466,789) discloses a method to avoid interruption of voice transmission. Bruhn teaches segments  $n$ ,  $n+1$ ,  $n+2$ , ... are associated with transmission bursts, or transmission quanta and specifically one segment to four transmission quantas,  $1'2'3'4'$ ;  $1''2''3''4''$ , ..., col. 4, ln. 41-44. The segments are coded a first and second mode, col. 2, ln. 24-30. The transmission quantas are divided into an lower, col. 5, ln. 4, and upper half, col. 5, ln. 6. However, Bruhn does not teach a method to divide transmitting terminals into two subsets and receiving terminals into two groups in order to minimize the delay caused by the changed over time between transmitting and receiving modes of operation, similar to the Applicant's.

### **Conclusion**

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW

BW  
April 15, 2006



HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600